

# A Revision of the Asian *Asterope*-Group of the Genus *Ypthima* HÜBNER (Lepidoptera, Satyridae)

Yoshinobu UÉMURA

Research Institute of Evolutionary Biology,  
2-4-28, Kamiyoga, Setagaya-ku, Tokyo, 158 Japan

Phylogenetic analysis of mainly Asian species of the genus *Ypthima* was provided by SHIRÔZU and SHIMA (1979), but they did not give diagnoses of their specific and subspecific characters. FRUHSTORFER (1911) made an attempt to review the Indo-Australian species of the genus as a whole, but almost all other works on the genus subsequent to him dealt with the species only from a part of Asia. It is usually difficult to distinguish the species of the genus on their external characters, as they show considerable individual, seasonal and geographical variations. This has led to many misidentifications and confusions of synonymy. The aim of this work is to provide a taxonomic revision of the *asterope*-group supplemented by an identification guide to species and subspecies, and to note on their nomenclature and distribution.

Following abbreviations are used for the institutions where the types or other specimens examined in this study are deposited.

BMNH	British Museum (Natural History), London
HUFAE	Hokkaido University, Faculty of Agriculture, Entomological Institute, Sapporo
KUCGE	Kyushu University, College of General Education, Biological Laboratory, Fukuoka
MNHN	Muséum National d'Histoire Naturelle, Paris
RIEB	Research Institute of Evolutionary Biology, Tokyo
RNH	Rijksmuseum van Natuurlijke Historie, Leiden
SMN	Naturmuseum Senckenberg, Frankfurt a. M.

Otherwise following abbreviations are used: wsf=wet-season form; dsf=dry-season form.

## Systematics

### The *Asterope*-Group

The diagnostic characters of the *asterope*-group were described and defined by SHIRÔZU and SHIMA (1979). This group includes only two species from the Oriental Region. Many Ethiopian species, however, may be included in this group (SHIRÔZU & SHIMA, 1979) or at least in a group closely allied to it. Judging from my own examination of the genitalia and descriptions and illustrations made by KIELLAND (1982), the following Ethiopian species obviously belong to the *asterope*-group; *Ypthima yatta* KIELLAND, *Y. congoana* OVERLAET, *Y. rhodesiana* CARCASSON, *Y. simplicia* BUTLER,

*Y. condamini* KIELLAND, *Y. antennata* VAN SON, *Y. jacksoni* KIELLAND, *Y. vuattouxi* KIELLAND, *Y. lamto* KIELLAND, *Y. recta* OVERLAET, *Y. granulosa* BUTLER. Asian species of this group usually appears to be found on grassy and rocky slopes of hills in open savannah country.

### Key to the Species of the Asian *Asterope*-Group

1. Upperside of forewing with pale area surrounding ocellus apparent. Underside with fine striation. ♂ valva comparatively short, narrowed gradually beyond basal 2/3, twisted above the middle (Fig. 2) ..... *asterope*
- Upperside of forewing with pale area surrounding ocellus usually indistinct. Underside with coarse striation. ♂ valva strongly narrowed beyond basal 3/5 (Fig. 4) ..... *norma*

### Descriptions of the Species and Subspecies

#### *Ypthima asterope* (KLUG)

This species occurs in Africa, south of the Sahara and Arabia, and throughout Indian subcontinent. In Arabia it occurs in Oman, Hadhramaut, Western Aden, Yemen, Hejaz, Israel (Galilee), Lebanon and Syria, extending as far north as Turkey (Adana district). I have seen no records from Mesopotamia to Persia, nor from Afghanistan except Khyber Pass. Three subspecies have been recognized, one of which is represented in Asia.

#### *Ypthima asterope mahratta* MOORE

(Figs. 1, 2, 5, 6)

*Ypthima mahratta* MOORE, 1884: 16–17. Syntypes ♂ ♀, Deccan (BMNH) [examined]; SWINHOE, 1885: 127. Bombay; SWINHOE, 1886: 423. Mhow, Neemuch; BUTLER, 1888: 137. North-west India.

*Pandima mahratta* (wsf. *mahratta*, dsf. *alemola*): MOORE, [1893]: 90–92, pl. 114, figs. 1, 1a (♂ ♀, wsf), figs. 1b, 1c (♂, dsf).

*Ypthima asterope mahratta*: FRUHSTORFER, 1911: 286; EVANS, 1923: 785, pl. 13, fig. D14.6 (♂). Chamba-Assam; MACPHERSON, 1927: 229. Mount Abu, Jodhpur; MOSSE, 1929: 890. Kathiawar (Bhavnagar); EVANS, 1932a: 120, pl. 13, fig. D14.6 (♂). Chamba-Assam; EVANS, 1932b: 202. Baluchistan; LOGAN HOME, 1935: 893. Secunderabad; DONAHUE, 1967: 43. Rajasthan (Sumerpur); SMITH, 1978: 144. Nepal, 1200 to 3900 feet; SAKAI, 1981: 205, pl. 23 (=p. 67), figs. 14, 17 (♂). Khaiber Pass.

*Ypthima asterope mahratta* (wsf. *mahratta*, dsf. *alemola*): TALBOT, 1947: 325. Baluchistan, Chamba to Assam and southwards.

*Ypthima alemola* SWINHOE, 1885: 127. Syntypes ♂ ♀, Poona [untraced]; SWINHOE, 1886: 423. [Mhow]; BUTLER, 1888: 137. North-west India.

*Ypthima asterope mahratta* f. *alemola*: FRUHSTORFER, 1911: 286 [dsf].

*Ypthima asterope*: MARSHALL & DE NICÉVILLE, 1883: 221, 224–225; SWINHOE, 1887: 271. Karachi; ELWES & EDWARDS, 1893: 11–12 [in part]; MACKINNON & DE NICÉVILLE, 1897: 219. Dun; SOUTH, 1902: 37. Kashmir (Kukti); BINGHAM, 1905: 145–146; DE RHÉ-PHILIPPE, 1908: 884. Konkan (Andheri); HANNYNGTON, 1910: 136. Kumaun; WYNTER-BLYTH, 1957: 115–116,

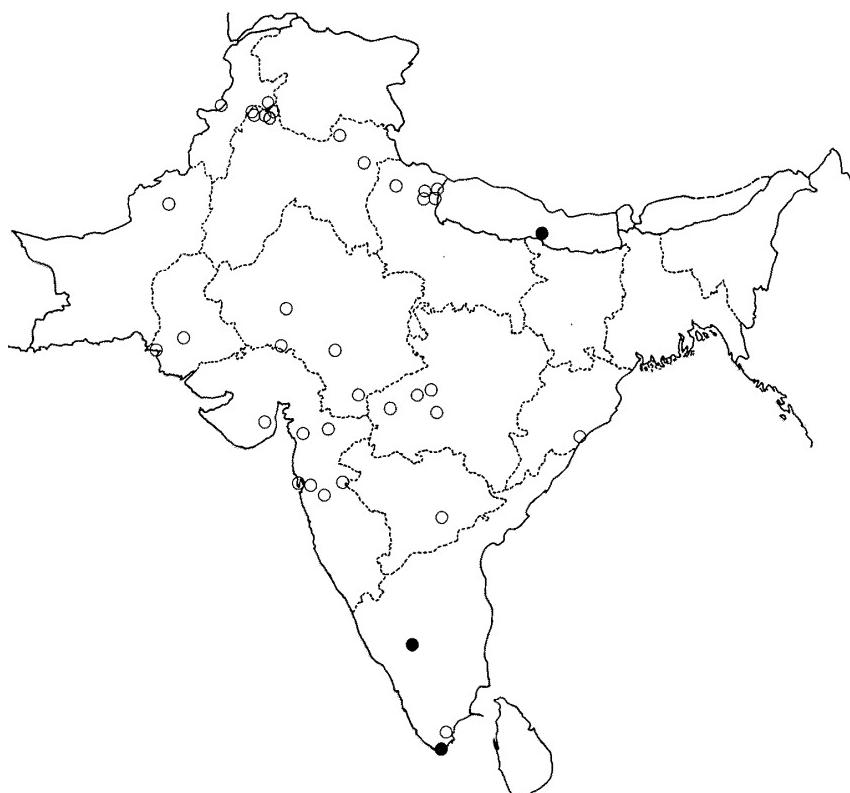


Fig. 1. The geographical distribution of *Ypthima asterope mahratta*. The data have been obtained from specimens seen by author (solid circles) and from the literature (open circles).

pl. 13, fig. 5 (♀) [recte ♂]. Baluchistan and all India; SHULL, 1963: 586. South Gujarat; SHIRÔZU & SHIMA, 1979: 260, pl. 29, fig. 23 (♂ genitalia), pl. 46, fig. 64 (♀ genitalia), pl. 52, fig. 11 (androconia), pl. 62, figs. 77, 78 (♂). Pakistan.

*Ypthima* [sic] *asterope*: DOHERTY, 1886: 119. Kumaon.

#### Wet-season form.

♂ ♀. *Upperside of forewing*: Ground colour dark brown; inner and outer discal fasciae absent; submarginal and marginal fasciae rather distinct and dark; subapical ocellus large, black, bipupilled, and narrowly yellow-ringed; area surrounding ocellus paler; fringe bicoloured, basal portion whitish-brown and distal portion brown; brand absent. *Upperside of hindwing*: Ground colour dark brown; inner and outer discal fasciae absent; submarginal fascia obscure; marginal fascia rather distinct and dark; round, unipupilled, and yellow-ringed small ocellus present in space 2; fringe bicoloured, basal and distal portions ochreous white, central portion brown. *Underside of forewing*: Ground colour greyish white; sparsely striated with brown; inner discal fascia absent; outer discal and submarginal fasciae well developed, joined with each other in space 2; marginal fascia distinct and dark; subapical ocellus as on upperside, but yellow ring broader than on upperside; fringe bicoloured, basal portion greyish white and distal portion dark brown. *Underside of hindwing*: Ground colour greyish white; sparsely striated with brown; inner discal and outer discal fasciae indistinct;

submarginal fascia indistinct; marginal fascia rather distinct and dark; round, unpupilled, and yellow-ringed small ocelli present in species 6 and 2; minute double ocellus present in space 1b; fringe bicoloured, basal and distal portions greyish white, central portion dark brown.

Dry-season form.

♂♀. Very similar to wet-season form. Ground colour of upper- and undersides much paler. All ocelli of underside of hindwing much smaller, ocellus in space 6 sometimes markedly reduced or totally absent.

Androconia very small, without distinct slender apical portion.

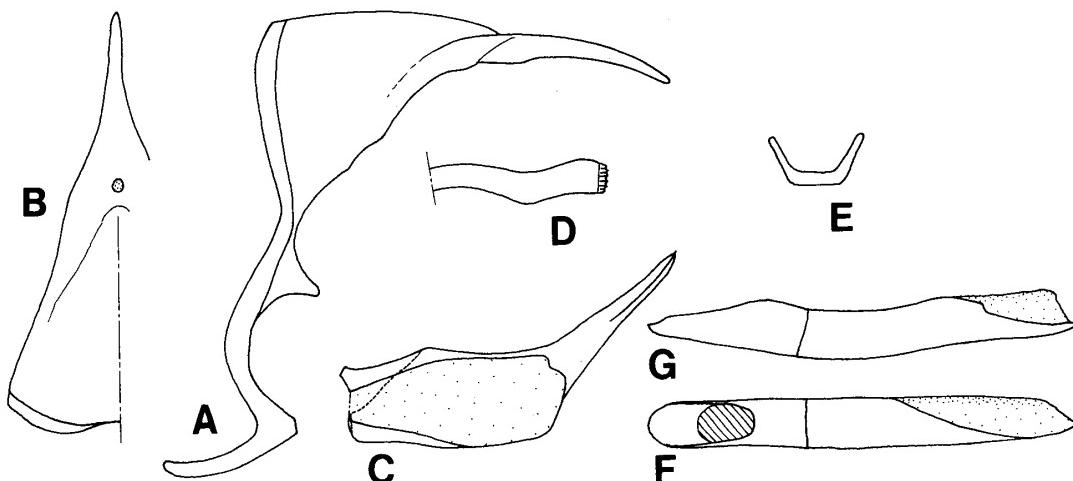


Fig. 2. Male genitalia of *Ypthima asterope mahratta* (S. India). A: Ring in lateral view. B: Dorsum in dorsal view. C: Inside of right valva. D: Apex of valva in dorsal view. E: Juxta in posterior view. F: Aedeagus in dorsal view. G: Ditto in lateral view.

*Length of forewing.* ♂, 14–16 mm. ♀, 16–18 mm.

*Specimens examined.* 1♂, C. Nepal: Amrekganji. 6♂4♀, S. India: Mysore; Kanniyakumari.

*Distribution.* Afghanistan: Nangarhar, Khyber Pass. Indian Subcontinent. North West Frontier: Abbottabad. Kashmir and Jammu: [Kukti]; [Kujiar]. Chamba to Kumaon: Chamba; Simla Hill; Dehra Dun; Kussowli [?Mussoorie]; Naini Tal; Bageshwar; Tákula [?Dhakuri]; Lower Sarju River; Lower Gori River. Punjab: Attock; Campbellpore; Hassan Abdal; Rawalpindi; Murree; [Khairabad (Kairabad)]; [Kala Pani]; [Akhori (Akhor)]. Baluchistan: road between Ziarat and Loralai. Sind: Karachi; Hyderabad. Rajputana: Jodhpur; Abu; [Sumerpur]. Western India to Bombay: Bhavnagar district; South Gujarat district; Khandesh; Bombay; Andheri [?Andhra]; Poona; Ahmednuggur [?Ahmadnagar]. Central India and Central Provinces: Neemuch [Nimach]; Mhow; Akote [?Akot]; Nagpur; Ghindwara [?Chhindwara]; Amri [?Amla]. Orissa: Ganjam. South India: Secunderabad; Mysore, Chamundi Hill; Tinnevelly [Tirunelveli]; Kanniyakumari. Nepal: Amrekganji (Amlekhganj).

*Variation.* Both sexes show conspicuous variation in the shape of the pale area

surrounding ocellus on the forewing and development of the ocelli on the both wings. The ocelli on the underside of hindwing are variable in size especially in the dry-season form, and they are sometimes very small, sometimes reduced to mere points or quite absent.

*Remarks.* This subspecies is different from other known subspecies of the same species in the following points: Colouration of the underside of both wings more whitish; yellow ring of subapical ocellus on the both side of forewing much broader; tornal ocellus on the upperside of hindwing slightly smaller.

#### *Ypthima norma* WESTWOOD

(Figs. 3, 4)

Wet-season form.

♂ ♀. *Upperside of forewing:* Ground colour dark brown; inner discal fascia absent; outer discal fascia obscure or absent; submarginal fascia usually well developed, sometimes obscure; marginal fascia rather distinct and dark; subapical ocellus large, black, bipupilled, and narrowly yellow-ringed; area surrounding ocellus slightly paler than ground colour; fringe brown; brand absent. *Upperside of hindwing:* Ground colour dark brown; inner and outer discal fasciae absent; submarginal fascia obscure or absent; marginal fascia rather distinct and dark; round, unipupilled, and yellow-ringed small ocellus present in space 2; fringe brown. *Underside of forewing:* Ground colour greyish white to ochreous white; sparsely striated with brown; inner discal fascia absent; outer discal fascia and submarginal fascia usually obscure, sometimes

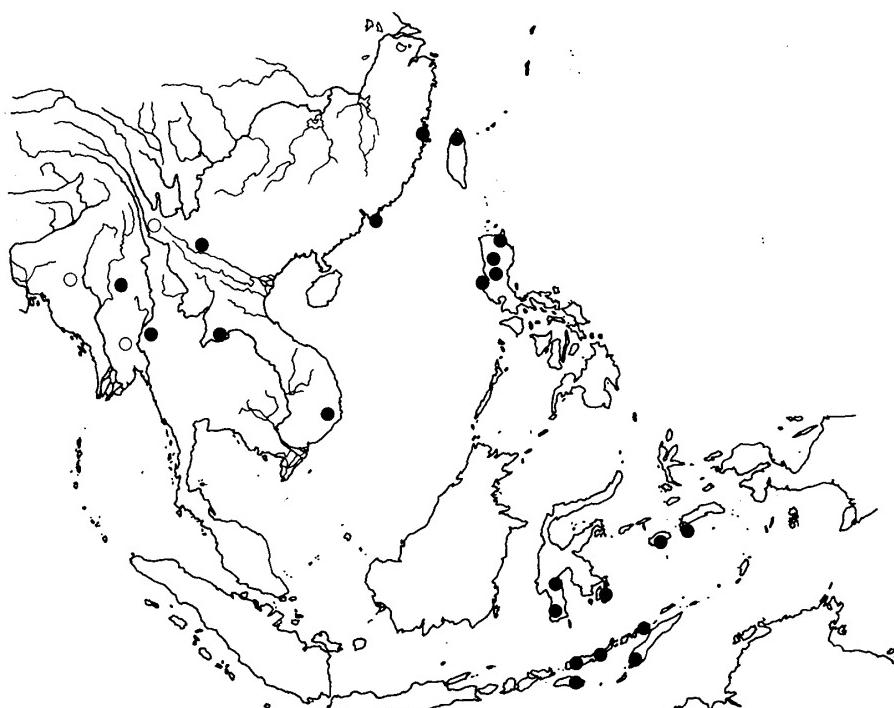


Fig. 3. The geographical distribution of *Ypthima norma*. The data have been obtained from specimens seen by author (solid circles) and from the literature (open circles).

well developed; marginal fascia distinct and dark; subapical ocellus as on upperside, but yellow ring broader than on upperside; fringe bicoloured, basal and distal portions ochreous white, central portion brown. *Underside of hindwing*: Ground colour greyish white to ochreous white; sparsely striated with brown; inner and outer discal fasciae absent; submarginal fascia obscure or absent; marginal fascia distinct and dark; round, unipupilled, and yellow-ringed small ocelli present in spaces 6 and 2; minute double ocellus present in space 1b, in which the ocellus sometimes reduced to mere speckle; fringe bicoloured, basal and distal portions ochreous white, central portion brown.

Dry-season form.

♂♀. Very similar to wet-season form. *Upperside of forewing*: Area surrounding ocellus more or less clearly defined. *Upperside of hindwing*: Submarginal fascia more or less prominent. *Underside of forewing*: Outer discal and submarginal fasciae well developed. *Underside of hindwing*: Inner and outer discal fasciae markedly developed; all ocelli markedly reduced, sometimes indicated by mere points.

Androconia absent.

*Length of forewing*. ♂, 12–17 mm. ♀, 14–18 mm.

This species occurs from Burma, Indo-China to South China and Formosa, possibly extending through the Philippines to Celebes and the South Moluccas, as far south as eastern islands of the Lesser Sundas. In this paper, I recognize provisionally nine subspecies. Further material is needed for study of the geographical variation.

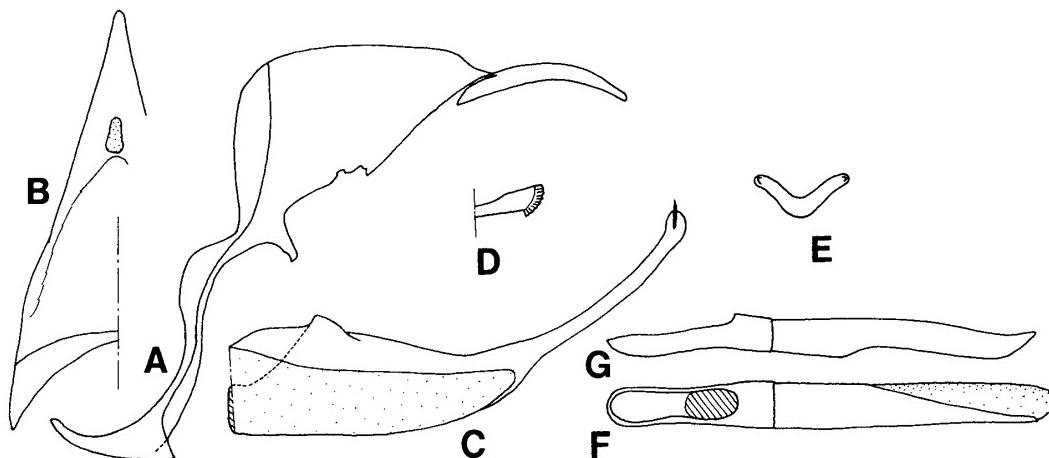


Fig. 4. Male genitalia of *Ypthima norma burmana* (N. Thailand). A: Ring in lateral view. B: Dorsum in dorsal view. C: Inside of right valva. D: Apex of valva in dorsal view. E: Juxta in posterior view. F: Aedeagus in dorsal view. G: Ditto in lateral view.

#### *Ypthima norma norma* WESTWOOD

(Figs. 7, 17a, 17b)

*Ypthima norma* WESTWOOD, [1851]: 395, pl. 67, fig. 1 [♂] (as *Iphthima*). LECTOTYPE ♂, Foochow, Fukien, S. China (BMNH), here designated [examined]; ELWES & EDWARDS, 1893: 51–52. Foochow, S. China.

*Ypthima asterope norma*: FRUHSTORFER, 1911: 286. China.

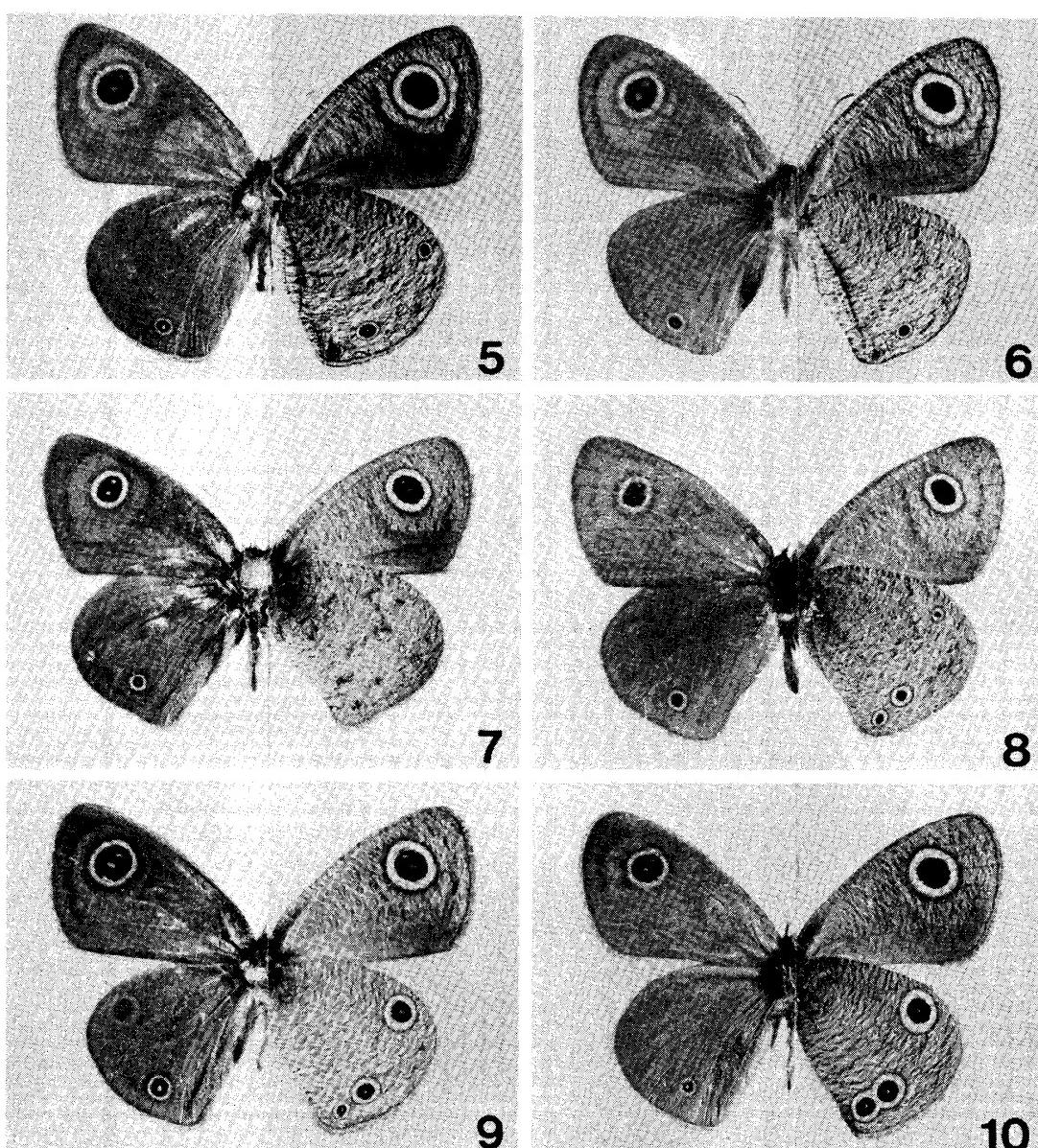
*Ypthima asterope burmana*: MARSH, 1968: 61, pl. 20, fig. 14 (♀). Hong Kong.

*Ypthima posticalis*: HILL, JOHNSTON & BASCOMBE, 1978: 8. Hong Kong.

*Type-Material*. Described from unspecified number of specimens. One male specimen in the BMNH bears the following labels; 'Type/Foo Chow. ~ Foo. China. G.T. Lay. AS-65./norma Westw type/B.M. TYPE No. Rh 3320. *Ypthima norma* ♂ Westw.' This specimen is hereby designated as lectotype and is labelled accordingly.

*Specimens examined*. 1♂ (wsf), S. China: Fukien, Foochow. 2♂ (dsf), S. China: Hong Kong, New Territories.

*Distribution*. South China.



Figs. 5-10. Upper- and undersides of the *asterope*-group species. 5: *Y. asterope mahratta* ♂ (wsf). 6: Ditto ♂ (dsf). 7: *Y. norma norma* ♂ (dsf). 8: *Y. norma annamitica* ♂ (wsf). 9: *Y. norma burmana* ♂ (wsf). 10: Ditto ♂ (wsf) (Yunnan).

*Ypthima norma annamitica* FRUHSTORFER

(Fig. 8)

*Ypthima asterope annamitica* FRUHSTORFER, 1911: 286, pl. 99, fig. c5. LECTOTYPE ♂, South Annam (BMNH), here designated [examined].

This subspecies is distinguishable from all other subspecies by the following combination of the characters. Underside ground colour more whitish; forewing with subapical ocellus rather oval; the wet-season form has all ocelli on the hindwing smaller than in the other subspecies; the dry-season form has two discal fasciae on the hindwing more prominent than in the other subspecies.

*Type-Material.* Described from an unspecified number of specimens from South Annam. One male specimen in the BMNH bears the following labels; 'Type/Süd-Annam Xom Gom Februar H. Fruhstorfer/annamitica Fruhst./Fruhstorfer Coll. B. M. 1937-285.' This specimen is hereby designated as lectotype and is labelled accordingly.

*Specimens examined.* 1♂(wsf), 2♂(dsf), S. Annam: Dalat; Lang Bian; [Xom Gom].

*Distribution.* South Annam.

*Ypthima norma burmana* EVANS

(Figs. 4, 9, 10)

*Ypthima asterope burmana* EVANS, 1923: 785-786. LECTOTYPE ♂, Maymyo, Burma (BMNH), here designated [examined].

*Ypthima burmana*: WATKINS, 1927: 326. Valley of Loma River, Yunglung, Yunnan; EVANS, 1932a: 120. N. Burma; TALBOT, 1947: 325-326. N. Burma (Maymyo and Toungoo).

*Ypthima asterope*: WATSON, 1897: 650-651. North Chin Hills.

This subspecies is distinguishable from all other subspecies by the following combination of the characters. Upperside hindwing with tornal ocellus always present. Underside hindwing with all ocelli rather large.

*Type-Material.* Described from an unspecified number of specimens from northern Burma. One male and one female specimens in the BMNH each bear the following label; 'Type/Maymyo 6.13/W.H. Evans Brit. Mus. 1923-190./B. M. TYPE No. Rh. 6191 Ypthima asterope burmana, ♂ Evans', 'Type/Maymyo 7.12/W. H. Evans Brit. Mus. 1923-190./B. M. TYPE No. Rh. 6192 Ypthima asterope burmana, ♀ Evans'. The male specimen is hereby designated as lectotype and labelled accordingly. The female is designated as paralectotype.

*Specimens examined.* 1♂ 1♀ (wsf), N. Burma: Maymyo. 2♂ (wsf), N. Thailand: Mae Hong Son. 1♀ (wsf), Laos: Vientiane. 1♂ (wsf), W. China: Yunnan, Shihrin.

*Distribution.* Burma, Northern Thailand, Laos and Western China (Yunnan).

*Remarks.* Examples from Yunnan and Laos have slightly paler ground colour

and broader yellow ring. They may represent a new subspecies.

*Ypthima norma posticalis* MATSUMURA stat. nov.

*Ypthima posticalis* MATSUMURA, 1909: 92. Holotype ♀, Horisha, Formosa (HUFAE) [examined];

SHIRÔZU, 1960: 124, pl. 33, figs. 237–240 (♂ ♀), text-fig. 150 (♂ genitalia). N. Formosa.

*Ypthima minuta* MATSUMURA, 1909: 92. Lectotype ♂, Hokuto, Formosa (HUFAE), [examined].

*Type-Material.* See UÉMURA (1984).

*Specimens examined.* 5♂ 1♀ (wsf), Formosa: Hokuto; Shirin; ? Horisha.

*Distribution.* North Formosa.

*Remarks.* The tornal ocellus on the upperside of hindwing present or absent. Only the wet-season form is known.

*Ypthima norma aei* SHIRÔZU & SHIMA

*Ypthima posticalis aei* SHIRÔZU & SHIMA, 1977: 501–504, text-figs. 1, 2. Holotype ♂, Baguio, Luzon (KUCGE) [examined]; AOKI *et al.*, 1982: 379, pl. 68 (=p. 104), figs. 26–29 (♂ ♀), text-fig. (♂ genitalia). Luzon.

*Ypthima asterope*: SEMPER (G.), 1887: 49. N. W. Luzon.

SEMPER (G.) (1887) recorded four males from valley of Agno (alt. 1200–1600 m) under the name of *Ypthima asterope*. These examples [recte 3♂ 1♀] are now preserved in the SMN and examined.

*Specimens examined.* 1♂ (dsf), Luzon: Cagayan, Callao. 7♂ 2♀ (6♂ 2♀ wsf and 1♂ dsf), Luzon: Bontoc, Sagada; Benguet, nr. Abatan; Benguet, Baguio; Pangasinan, Agno.

*Distribution.* Luzon.

*Remarks.* The tornal ocellus on the upperside of hindwing is present or absent. It is expected that this subspecies occurs throughout the Philippines except Palawan.

*Ypthima norma pusilla* FRUHSTORFER stat. nov.

(Fig. 11)

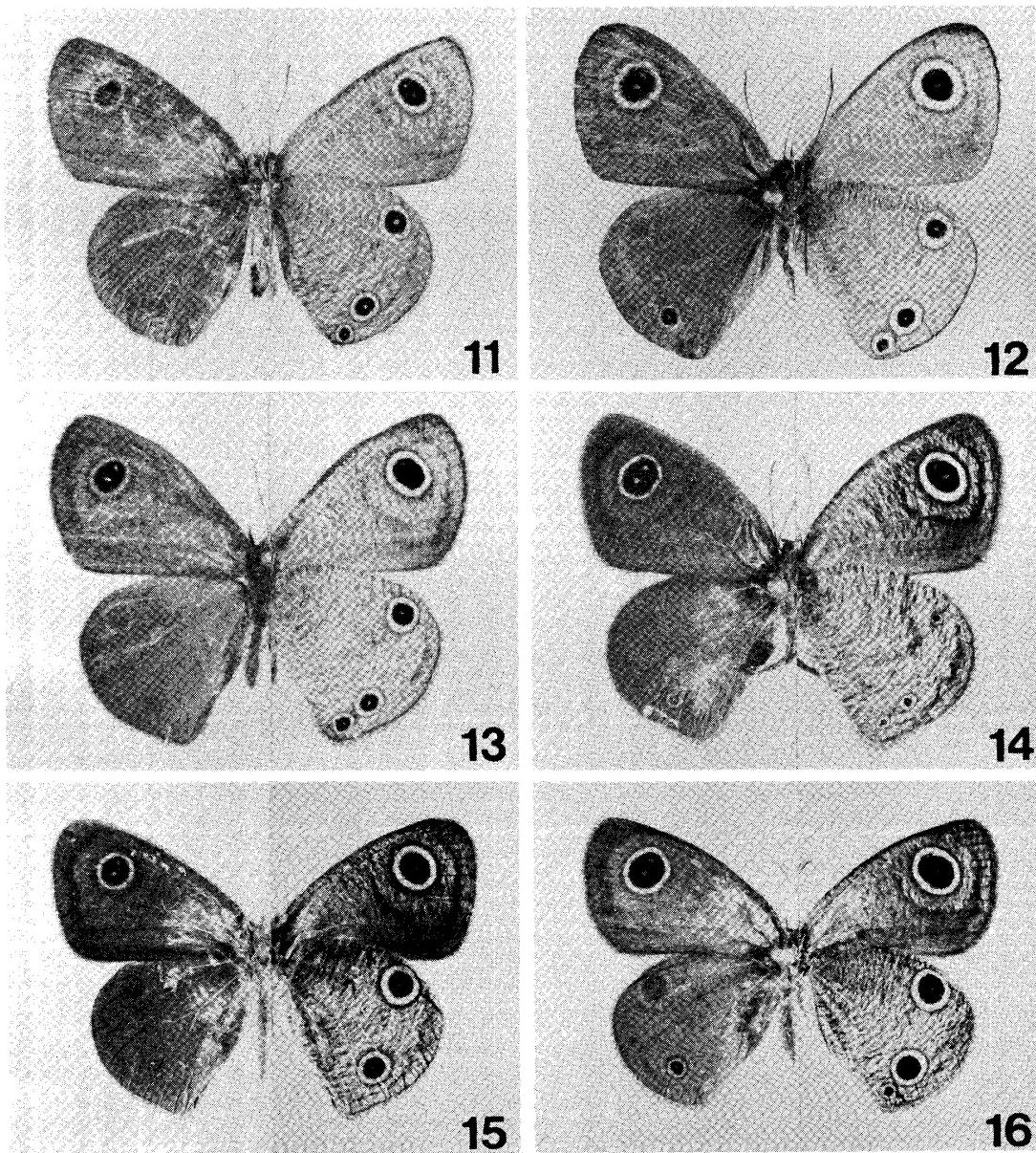
*Ypthima pusilla* FRUHSTORFER, 1911: 287, pl. 99, fig. c6 (as *minuta*) [in part]. Syntype(s) ♀, S. Celebes (probably MNHN) [not examined]; MARTIN, 1929: 119–120. Maros, S. Celebes; AOKI *et al.*, 380, pl. 68 (=p. 104), figs. 24 (♂), 25 (♀), text-fig. (♂ genitalia) [in part]. C. & S. Celebes.

*Yphthima* [sic] *asterope*: HOLLAND, 1891: 57. S. Celebes; ROTHSCHILD, 1892: 433. S. Celebes.

The type-series of this taxon has been regarded as syntypic. According to MARTIN (1922), the female(s) type series came from S. Celebes.

This subspecies is distinguishable from all other subspecies by the following combination of the characters. Upperside ground colour paler; forewing with subapical ocellus more or less reduced. Underside ground colour much darker; forewing with yellow ring of subapical ocellus much narrower; hindwing with yellow rings of all ocelli much narrower.

*Specimens examined.* 1♂ 2♀ (wsf), C. Celebes: Todjambu; nr. Palopo. 1♂ (wsf), Butung.



Figs. 11–16. Upper- and undersides of the *asterope*-group species. 11: *Y. norma pusilla* ♂ (wsf) (Butung). 12: *Y. norma moluccana* ssp. nov., ♂, paratype. 13: *Y. norma sumbana* ssp. nov., ♂, holotype. 14: Ditto, ♂, paratype (dsf). 15: *Y. norma florensis* ♂ (lectotype). 16: Ditto ♀ (paralectotype).

*Distribution.* Celebes, Butung.

*Remarks.* Only the wet-season form is known. Example from Butung has much darker ground colour.

#### *Ypthima norma moluccana* subsp. nov.

(Fig. 12)

*Ypthima pusilla* FRUHSTORFER, 1911: 287 [in part]. Amboina; ECKE, 1929; 358. Buru (The specimens now housed in the RNH, examined).

*Ypthima pusilla pusilla*: KATO, 1980: 242–243, text-figs. 19–22 (♂ ♀). Ambon.

This new subspecies is distinguishable from all other subspecies by the following combination of the characters.

Upperside ground colour paler; forewing with subapical ocellus more or less prominent, with its yellow ring much broader; hindwing with tornal ocellus more prominent. Underside ground colour paler; forewing with yellow ring of subapical ocellus much broader; hindwing with tornal ocellus more prominent, yellow rings of all ocelli much broader.

Holotype ♀, Amboina, 7. i. 1974 (AOKI & YAMAGUCHI) (RIEB).

Paratypes 9♂ 2♀, Amboina, 6–16. i. 1974 (AOKI & YAMAGUCHI).

*Distribution.* Amboina, Buru.

*Remarks.* Only the wet-season form is known.

#### *Yphthima norma florensis* SNELLEN stat. nov.

(Figs. 15, 16)

*Yphthima* [sic] *florensis* SNELLEN, 1891: 235–236, pl. 14, fig. 3 (♂). LECTOTYPE ♂, Flores (RNH), here designated [examined].

*Yphthima florensis*: FRUHSTORFER, 1911: 287, pl. 99, fig. c4. Flores; AOKI *et al.*, 1982: 381, pl. 69 (=p. 105), figs. 1–4 (♂ ♀) [in part]. Flores, Alor.

This subspecies is distinguishable from all other subspecies by the following combination of the characters. Upperside hindwing with tornal ocellus absent or obscure. Underside forewing with outer discal and submarginal fasciae more prominent; hindwing with ocelli in spaces 6 and 2 larger.

*Type-Material.* Described from one male and two females which are now preserved in the RNH. Each bears the following label; ‘Flores Maumerie ♂/Yphth. Florensis Snell. orig. des afb./Type ♂/Museum Leiden Y. florensis Snell. Det RvE/Cat. No. 1’, ‘Flores Maumerie ♀/Type ♀/Museum Leiden Y. florensis Snell. Det RvE/Cat No 3’ (Figured by AOKI *et al.*, 1982: pl. 69 (=p. 105), fig. 2♀ V), ‘Flores Maumerie/Type ♀/Museum Leiden Y. florensis Snell. Det RvE/Cat No 2’. The male specimen is hereby designated as lectotype and labelled accordingly. The remaining two females are similarly designated as paralectotype.

*Specimens examined.* 2♂ 2♀ (wsf), Flores: Maumere; [Borong]. 2♂ (wsf), Alor.

*Distribution.* Flores, Alor.

*Remarks.* Only the wet-season form is known.

#### *Yphthima norma sumbana* subsp. nov.

(Figs. 13, 14)

*Yphthima* [sic] *asterope*: DOHERTY, 1891: 169. Sumba.

*Yphthima asterope*: NICÉVILLE & ELWES, 1898: 679. Sumba.

*Yphthima florensis*: AOKI *et al.*, 1982: 381, pl. 68 (=p. 104), fig. 30 (♀) [in part]. Sumba.

This new subspecies is distinguishable from all other subspecies by the following combination of the characters.

Smaller in size. Upperside forewing with subapical ocellus rather oval, its yellow ring much narrower. Subapical ocellus and its yellow ring on underside forewing as on upperside; hindwing with ocellus in space 1b more prominent, yellow rings of all ocelli much narrower.

Holotype ♂ (wsf), Sumba, 20. viii. 1978 (TAKIZAWA) (RIEB).

Paratypes 2♂ (1♂ wsf and 1♂ dsf), same data as holotype. 1♀ (wsf), 1-13. vii. 1980.

*Distribution.* Sumba.

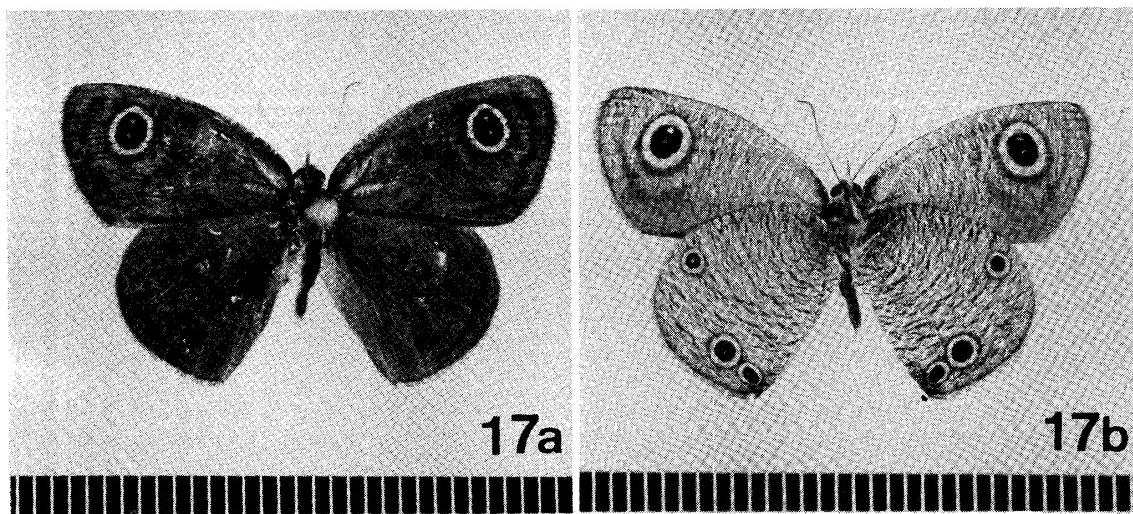
#### *Ypthima norma* subsp. *incertae sedis*

*Ypthima florensis*: AOKI et al., 1982: 381, pl. 69 (=p. 105), fig. 5 (♂) [in part]. Timor.

An example from Timor has the underside ground colour darker than all other subspecies. It is expected that examination of the longer series of material will reveal the subspecific status of that from the island. Only the dry-season form is known at present.

*Specimens examined.* 1♂ (dsf), Timor.

*Distribution.* Timor.



Figs. 17a-17b. *Ypthima norma* WESTWOOD, lectotype ♂. 17a: Upperside. 17b: Underside.

#### Acknowledgements

I would like to express my sincere thanks and warmest gratitude to Dr. R. DE JONG, Rijksmuseum van Natuurlijke Historie, Leiden, for the loan of type-specimens and for English translation of the Dutch original descriptions; Mr. R. I. VANE-WRIGHT and Mr. P. R. ACKERY, British Museum (Natural History), London, for their help while I was studying the museum collections; Dr. H. SCHRÖDER, Naturmuseum Senckenberg, Frankfurt a.M., for his help to examine the SEMPER collection under his care; Dr. H. SHIMA, Kyushu University, for the loan of valuable specimens under his care (including the specimens presented by Col. J. N. ELIOT). I wish to thank Dr. Y. KUROSAWA,

National Science Museum (Natural History), Tokyo, who has helped me to examine the national collection under his care. My cordial thanks are also due to Dr. S. OKAJIMA, Tokyo University of Agriculture, for his critical reading of the manuscript. I would also like to thank my many colleagues and gentlemen. Mr. T. AOKI and Mr. S. YAMAGUCHI for their support and comments; Mr. K. MORISHITA (Zushi) for reading manuscript; Professor T. FUJIOKA (Keio University), Mr. E. TSUKADA (Tokyo), Mr. T. MIYASHITA (Tokyo), for allowing my access to their private collections; Mr. J. KANEKO for taking photographs. I am grateful to Professor N. KONDO, the Director of Research Institute of Evolutionary Biology, for his constant encouragement.

### References

- AOKI, T., YAMAGUCHI, S. & Y. UÉMURA, 1982. In TSUKADA, E., *Butterflies of the South East Asian Islands* 3. 500 pp., inc. 113 pls. (=pp. 33–152). Plapac, Tokyo. (In Japanese.)
- BINGHAM, C. T., 1905. *The Fauna of British India, including Ceylon and Burma. Butterflies* 1 (Edn. 1). 22+511 pp., 10 pls., 94 text-figs. Taylor & Francis, London.
- BUTLER, A. G., 1888. An account of three series of Lepidoptera collected in North-west India by Major YERBURY. *Ann. Mag. nat. Hist.*, (6), 1: 132–151, 196–209.
- DOHERTY, W., 1886. A list of butterflies taken in Kumaon. *J. Asiatic Soc. Beng.*, Pt II, 55: 103–140.
- 1891. The butterflies of Sumba and Sambawa, with some account of the Island of Sumba. *Ibid.*, Pt II, 60: 141–197, pl. 2.
- DONAHUE, J. P., 1967. An annotated list of the butterflies of Delhi, India. *J. Bombay nat. Hist. Soc.*, 64: 22–48.
- ECKE, R. VAN, 1929. Fauna Buruana. Lepidoptera Rhopalocera. *Treubia*, 7: 351–370, pl. 8.
- ELWES, W. H. & J. EDWARDS, 1893. A revision of the genus *Ypthima*, with especial reference to the characters afforded by the male genitalia. *Trans. ent. Soc. Lond.*, 1893: 1–54, pls. 1–3.
- EVANS, W. H., 1923. The identification of Indian butterflies. Part 3. *J. Bombay nat. Hist. Soc.*, 29: 780–797, pls. 13–16.
- 1932a. *The Identification of Indian Butterflies* Edn. 2. 10+454 pp., 32 pls. Bombay Natural History Society, Madras.
- 1932b. The butterflies of Baluchistan. *J. Bombay nat. Hist. Soc.*, 36: 196–209.
- FRUHSTORFER, H., 1911. In SEITZ, A., *Die Gross-Schmetterlinge der Erde* (2): *Exotische Fauna* (9). *Indo-australischen Tagfalter*. Gattung *Ypthima*. pp. 286–294, pl. 99. Alfred Kernen, Stuttgart.
- HAMPSON, G. F., 1889. The butterflies of the Nilgiri District, South India. *J. Asiatic Soc. Beng.*, Pt II, 57: 346–368.
- HANNYNGTON, F., 1910. The butterflies of Kumaun. *J. Bombay nat. Hist. Soc.*, 20: 130–142, 361–372, with a map.
- HILL, D. S., JOHNSTON, G. & M. J. BASCOMBE, 1978. Annotated checklist of Hong Kong butterflies. *Mem. Hong Kong nat. Hist. Soc.*, (11): 1–62.
- HOLLAND, W. J., [1891]. Asiatic Lepidoptera. List of the Diurnal Lepidoptera taken by Mr. William DOHERTY of Cincinnati in Celebes, June and July, 1887, with descriptions of some apparently new forms. *Proc. Boston Soc. nat. Hist.*, 25: 52–82, pls. 3–5.
- KATO, S., 1980. Notes on the Satyridae and Amathusiidae from Ambon Island, Indonesia. *Tyô to Ga*, 30: 239–244. (In Japanese.)
- KIELLAND, J., 1982. Revision of the genus *Ypthima* in the Ethiopian Region excluding Madagascar (Lepidoptera, Satyridae). *Tijdschr. Ent.*, 125: 99–154, inc. pls. 1–8 (=pp. 147–154).
- LOGAN HOME, W. E. M., 1935. The butterflies of Secunderabad. *J. Bombay nat. Hist. Soc.*, 37: 892–894.
- MACKINNON, P. W. & L. DE NICÉVILLE, 1897. A list of the butterflies of Mussoorie in the Western

- Himalayas and neighbouring regions. *J. Bombay nat. Hist. Soc.*, **11**: 205–221, pls. U, V, W.
- MACPERSON, A. D., 1927. Notes on a collection of butterflies made in Jodhpur and Mount Abu during the years 1924, 1925 and 1926. *Ibid.*, **32**: 228–230.
- MARSH, J. C. S., 1968. *Hong Kong Butterflies* Edn. 2. 8+113 pp., 34 pls. Shell, Hong Kong.
- MARSHALL, G. F. L. & L. DE NICÉVILLE, 1883. *The Butterflies of India, Burma and Ceylon 1* (Part II). pp. 95–327, pls. 10–17. Calcutta Central Press, Calcutta.
- MARTIN, L., 1922. *The Fruhstorfer collection of butterflies. Catalogue of Types with general account and list of the more interesting forms.* 8+135+9 pp., with a plate. Iris, Nice.
- 1929. Die Tagfalter der Insel Celebes. Teil 8: Satyriden. *Mitt. Münch. ent. Ges.*, **19**: 117–164, 371–380.
- MATSUMURA, S., 1909. Die Danaiden und Satyriden Japans. *Ent. Z., Frankf. a. M.*, **23**: 91–92.
- MOORE, F., 1884. Descriptions of some new Asiatic Diurnal Lepidoptera; chiefly from specimens contained in the Indian Museum, Calcutta. *J. Asiat. Soc. Beng.*, Pt II, **53**: 16–52.
- [1893]. *Lepidoptera Indica 2*. 274 pp., 96 pls. L. Reeve, London. [Published 1893–1896].
- MOSSE, A. H., 1929. A note on the butterflies and hawk-moths of Kathiawar. *J. Bombay nat. Hist. Soc.*, **33**: 888–892.
- NICÉVILLE, L. DE & H. J. ELWES, 1898. A list of the butterflies of Bali, Lombok, Sambawa and Sumba. *J. Asiat. Soc. Beng.*, Pt II, **66**: 668–724.
- RHÉ-PHILIPE, G. W. V. DE, 1908. Further notes on the butterflies of the Konkan. *J. Bombay nat. Hist. Soc.*, **18**: 884–886.
- ROTHSCHILD, W., 1892. Notes on a collection of Lepidoptera made by William DOHERTY in Southern Celebes during August and September, 1891. Part I, Rhopalocera. *Dt. ent. Z. Iris*, **5**: 429–442, pls. 4–7.
- SAKAI, S., 1981. *Butterflies of Afghanistan*. 271 pp., inc. 48 pls. (=pp. 45–92). Kodansha, Tokyo. (In Japanese.)
- SEMPER, G., 1887. In SEMPER, C. G., *Reisen im Archipel der Philippinen 2* (5). *Die Schmetterlinge der Philippinischen Inseln 1* (Die Tagfalter). 4+380 pp., 2+49 pls. C. W. Kreidel's, Wiesbaden. [Published 1886–1892.]
- SHIRÔZU, T., 1960. *The Butterflies of Formosa in colour*. 8+479 pp., 76 pls., 479 text-figs. Hoikusha, Osaka. (In Japanese.)
- & H. SHIMA, 1977. New species and subspecies of the genus *Ypthima* HÜBNER from Southeast Asia (Lepidoptera, Satyridae). *Kontyû*, **45**: 501–509.
- & — 1979. On the natural groups and their phylogenetic relationships of the genus *Ypthima* HÜBNER mainly from Asia (Lepidoptera: Satyridae). *Sieboldia*, **4**: 231–295, pls. 18–71.
- SHULL, E. M., 1963. The butterflies of South Gujarat. *J. Bombay nat. Hist. Soc.*, **60**: 585–599.
- SMITH, C., 1978. Scientific list of Nepals butterflies. *J. nat. Hist. Mus., Kathmandu*, **2**: 127–185.
- SNELLEN, P. C. T., 1891. Aanteekeningen over eene verzameling Lepidoptera, in October 1889 van het eiland Foores ontvangen. *Tijdschr. Ent.*, **34**: 229–256, pls. 14, 15.
- SOUTH, R., 1902. *Catalogue of the collection of Palaearctic Butterflies formed by the late John Henry Leech, and presented to the Trustees of the British Museum by his mother, Mrs. Eliza Leech*. 6+229 pp., 2 pls., with a portrait. British Museum (Natural History), London.
- SWINHOE, C., 1885. On the Lepidoptera of Bombay and the Deccan. *Proc. zool. Soc. Lond.*, **1885**: 124–148, pl. 9.
- 1886. On the Lepidoptera of Mhow, in Central India. *Ibid.*, **1886**: 421–465, pls. 40, 41.
- 1887. On the Lepidoptera of Karachi and its neighbourhood. (Part I). *J. Bombay nat. Hist. Soc.*, **2**: 269–280.
- TALBOT, G., 1947. *The Fauna of British India, including Ceylon and Burma. Butterflies 2* (Edn. 2). 15+506 pp., 2 pls., 104 text-figs., with a map. Taylor & Francis, London.
- UÉMURA, Y., 1984. A list of the *Ypthima* species (Lepidoptera, Satyridae) described by MATSUMURA, with lectotype designations. *Tyô to Ga*, **35**: 135–137.
- VANE-WRIGHT, R. I., 1975. The butterflies named by J. F. GMELIN (Lepidoptera: Rhopalocera).

- Bull. Br. Mus. nat. Hist. (Ent.)*, **32**: 17–64, 6 pls.
- WATKINS, H. T. G., 1927. Butterflies from N. W. Yunnan. *Ann. Mag. nat. Hist.*, (9), **19**: 313–344.
- WATSON, E. J., 1897. Notes on a collection of butterflies from the North Chin Hills and Upper Chindwin District, Burma. *J. Bombay nat. Hist. Soc.*, **10**: 634–687, pl. A.
- WESTWOOD, J. O., 1851. In DOUBLEDAY, E. & J. O. WESTWOOD, *The genera of Diurnal Lepidoptera: comprising their generic characters, a notice of their habits and transformations, and a catalogue of the species of each genus 2.* pp. 251–534, pls. 31–80 & suppl. pl. Longman, Brown, Green, & Longmans, London. [Published 1850–1852.]
- WYNTER-BLYTH, M. A., 1957. *Butterflies of the Indian Region.* 20+523 pp., 72 pls. Bombay Natural History Society, Bombay.

## 摘要

### アジア産 *Asterope* 種群（ウラナミジャノメ属）の再検討（植村好延）

アジアに産するウラナミジャノメ属 *Ypthima* の 1 種群, *asterope* 種群について分類学的再検討を行った。本種群にはアジア産の 2 種が含まれ、そのうちの 1 種 *Y. asterope* はサハラ以南のアフリカ大陸およびアラビア半島に広く分布しており、アジアではインド亜大陸から知られている。アジア、アフリカ両大陸にまたがって分布している他の幾つかのチョウと同様に本種もメソポタミアからアフガニスタンにかけて分布の大きな空白地帯が見出される。本種群に含まれるもう 1 つの種、*Y. norma* は、大陸部ではビルマからインドシナを経て中国南部まで、島嶼部では台湾からフィリピン群島を通じてセレベス、南モルッカ群島、小スンダ列島東部に分布する。大陸部のものは今まで *Y. asterope* の亜種と、島嶼部のものは *Y. posticalis*, *Y. pusilla*, *Y. florensis* としてそれぞれ独立種に考えられていたものである。本論文では *Y. asterope*, *Y. norma* の 2 種について検索を付してそれぞれの再記載を行った。*Y. norma* の地理的変異については今後より多くの標本に基づいて検討する必要があるが、現時点で 9 亜種を認めた。*asterope* 種群のチョウは乾燥地域のチョウで、アフリカ大陸で繁栄しており、アフリカ大陸のウラナミジャノメ属 *Ypthima* の大部分の種が本種群に属するものと考えられる。